

# Mental Health, Developmental Disabilities and Substance Abuse Related Admissions in Community Emergency Departments, Quarterly Report

Fourth Quarter, SFY 2006-07 and First Quarter, SFY 2007-08

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Appendix A. List of Hospitals Contributing Data

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#### **Purpose of Report**

The present report is in response to General Statute 122C-147.1. Section 10.49(r) "The Department of Health and Human Services shall develop a system for reporting to LMEs aggregate information regarding all visits to community hospital emergency departments due to a mental illness, a developmental disability, or a substance abuse disorder. The report shall be submitted on a quarterly basis beginning with the 2007-2008 fiscal years."

The report aggregates information collected through NC DETECT to summarize the utilization of community hospital emergency departments of the state by individuals with a behavioral health diagnosis (mental health and substance abuse). While information is available on those with a developmental disability diagnosis through this system, the numbers of those presenting with this condition in emergency departments are limited. The low representation does not allow the data on those with a developmental disability to be presented through this report at this time. The information is received by the Division of Mental Health, Developmental Disabilities and Substance Abuse Services through a data sharing agreement with the Division of Public Health. The data are provided to the Division of Mental Health as an aggregated file, providing the total number of admissions by disability status and age group. The data are also available to the Division disaggregated by age and gender for a statewide analysis. The consumers that are represented in the report are those who had a behavioral health, ICD-9¹ code, indicating their diagnosis. It is not clear from the data what the initial reason was for the consumer visit to the emergency department.

This report is the first of its nature. The Division expects to provide the Local Management Entities (LMEs) with updated information quarterly as per the legislative mandate. The data presented in the report showcase the volume of individuals with a mental health or a substance abuse diagnosis seeking care from an emergency department of a community hospital. It is expected that as multiple points of data become available to the Division and to the LMEs, patterns and trends will emerge. It is also anticipated that the volume of behavioral health consumers being provided care through emergency departments will decline as the LMEs continue to develop and

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<sup>&</sup>lt;sup>1</sup> The **International Statistical Classification of Diseases and Related Health Problems** (most commonly known by the abbreviation **ICD**) provides codes to classify <u>diseases</u> and a wide variety of signs, symptoms, abnormal findings, complaints, social circumstances and external causes of injury or disease. Every health condition can be assigned to a unique category and given a code, up to six characters long. Such categories can include a set of similar diseases.

strengthen the local crisis systems. The Division encourages Local Management Entities to contact hospitals within their catchment area and build relationships at the local level to understand the data presented further and to develop mechanisms to address the issues related to access to services. This report does not attempt to interpret or make conclusions on the data presented. The intent, explanation and potential limitation of each graph and chart, as applicable, is provided with the respective depiction.

#### 2. Source of Information

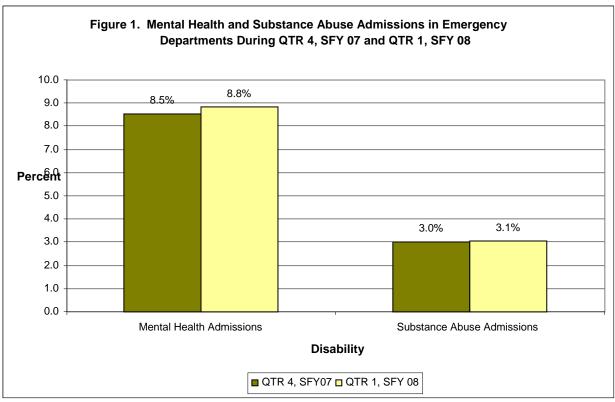
The North Carolina Disease Event Tracking and Epidemiologic Collection Tool (NC DETECT), is the early event detection system of the North Carolina Public Health Information Network. NC DETECT was created by the North Carolina Division of Public Health (NC DPH) in 2004 to address the need for early event detection and timely public health surveillance in North Carolina using a variety of secondary data sources. These secondary sources include information from local emergency departments, the Carolinas Poison Center, the Pre-hospital Medical Information System (PreMIS), and the NCSU College of Veterinary Medicine Laboratories (http://www.ncdetect.org/).

NC DETECT is developed and maintained by staff at the Department of Emergency Medicine at the University of North Carolina at Chapel Hill with funding by the NC DPH. Formerly known as the North Carolina Bioterrorism and Emerging Infection Prevention System (NC BEIPS), the name of the data system was changed to reflect that the system can be used for a myriad of public health surveillance needs (<a href="http://www.ncdetect.org/">http://www.ncdetect.org/</a>). Further information on the system and its data collection mechanisms can be obtained by contacting the system's administrators. The information presented in this report is based on reports received by the NC DETECT system from emergency departments of community hospitals.

The report has been prepared by the Quality Management Team (QMT)in the Community Policy Management Section of the Division of Mental Health, Developmental Disabilities and Substance Abuse Services. If you require any further explanation of the data presented, QMT staff can be contacted at contactDMHquality @ncmail.net or at (919)733-0696. This report will also be posted on the Division's website at <a href="http://www.ncdhhs.gov/mhddsas/">http://www.ncdhhs.gov/mhddsas/</a>

### 3. Emergency Department Admissions

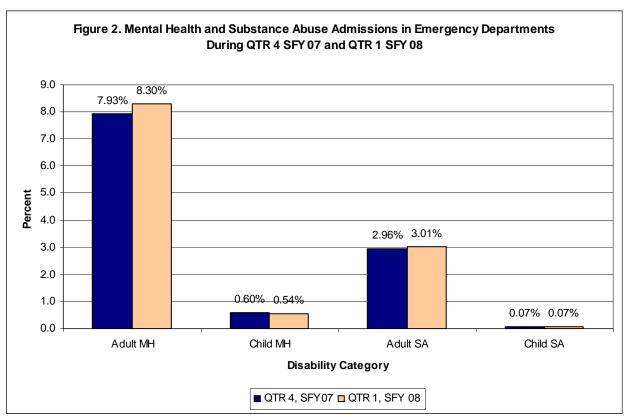
The data presented below (Figure 1) show the total percentage of consumers who were admitted to a local emergency department with a behavioral health (mental health and substance abuse only) diagnosis. The percentage is calculated as a function of the total admissions for all causes to emergency departments during the last quarter of SFY 2006-07 and the first quarter of SFY 2007-08. The number of admissions for a mental health diagnosis during the 4<sup>th</sup> quarter of SFY2006-07 was 76,042 and for the first quarter of SFY 2007-08 was 80,604. During these two quarters approximately 26,983 and 28,059 consumers respectively were seen in emergency departments for a substance abuse related issue. The total number of consumers receiving medical care for all conditions through emergency departments was roughly 891,971 during the 4<sup>th</sup> quarter of SFY 2006-07 and 911,953 during the 1<sup>st</sup> quarter of SFY 2007-08. The increase seen among behavioral health consumers parallels the overall increase in consumers seen in emergency departments.



Source: NC DETECT QTR 4, SFY 2007 and QTR 1, SFY 2008

Note: The data presented does not include information on child substance abuse admissions for Albemarle, Durham and Foothills LME for Qtr 4, 06-07 and from Durham and Johnston counties for Qtr 1, 07-08. Information on adult mental health admissions for Johnston County for qtr 4, 06-07 and child mental health admissions from Albemarle, Johnston and Onslow Carteret for Qtr 1, 07-08 is also not included. The data have been suppressed when cell counts are less than 10.

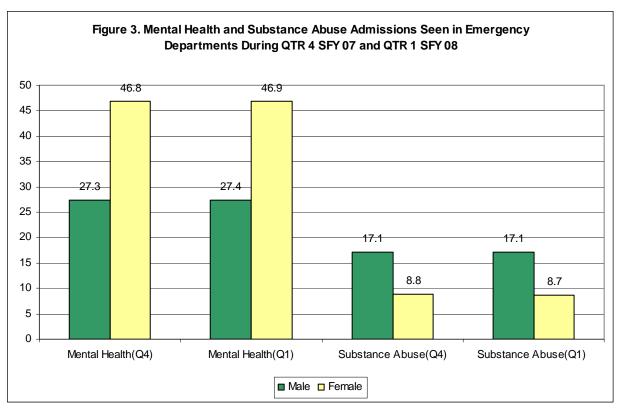
Figure 2 shows the percentage of admissions within local emergency departments disaggregated by age group and disability status. Data shows a higher representation of adults with a behavioral health diagnosis seeking care from the emergency departments compared to children and adolescents. The information is consistent over the two quarters for which data is available.



Source: NC DETECT QTR 4, SFY 2007 and QTR 1, SFY 2008

Note: The data presented does not include information on child substance abuse admissions for Albemarle, Durham and Foothills LME for Qtr 4, 06-07 and from Durham and Johnston counties for Qtr 1, 07-08. Information on adult mental health admissions for Johnston County for Qtr 4, 06-07 and child mental health admissions from Albemarle, Johnston and Onslow Carteret for Qtr 1, 07-08 is also not included. The data have been suppressed when cell counts are less than 10.

Figure 3 depicts the distribution of males and females seeking mental health and substance abuse related care through local emergency departments. There were a higher number of females seeking care for mental health, whereas the percentage of men being admitted for substance abuse related issues were double that of women.



Source: NC DETECT QTR 4, SFY 2007 and QTR 1, SFY 2008

Note: The data presented does not include information on child substance abuse admissions for Albemarle, Durham and Foothills LME for Qtr 4, 06-07 and from Durham and Johnston counties for Qtr 1, 07-08. Information on adult mental health admissions for Johnston County for Qtr 4, 06-07 and child mental health admissions from Albemarle, Johnston and Onslow Carteret for Qtr 1, 07-08 is also not included. The data have been suppressed when cell counts are less than 10.

Tables 1 and 2 present the counts and rates of admission for mental health and substance abuse related concerns for the two quarters. The rate allows for comparison of admissions across Local Management Entities, which provide services to counties with varied population sizes. The overall rates of admission per 10,000 population for mental health were 85.3 and 89.3 respectively for the 4<sup>th</sup> quarter, SFY 2007 and 1<sup>st</sup> quarter, SFY 2008 and the overall rate for substance abuse admissions were 29.8 and 31.0 respectively for the two quarters. The Western Highlands LME had one of the highest rates of mental health admissions for both quarters while Southeastern Regional had the highest rate of substance abuse related admissions during both quarters. Durham LME had the lowest rate of admissions during both quarters for both mental health and substance abuse.

Table 1. Emergency Department Admissions by Local Management Entity, QTR 4, SFY 2007, April 1- June 30, 2007						
Local Management Entity	Mental Health (n)	Rate of MH Admissions/10,000 population	Substance Abuse (n)	Rate of SA Admissions/10,000 population	Developmental Disabilities (n)	Rate of DD Admissions/10,000 population
Overall	77,139	85.3	26,983	29.8	*	*
ACR <sup>+</sup>	3,057	119.0	848	33.0	*	*
Albemarle	1,393	75.4	426	23.0	*	*
Beacon Center	1,691	69.1	650	26.6	*	*
Burke-Catawaba	3,553	146.4	994	41.0	*	*
CenterPoint	4,263	100.3	1,420	33.4	*	*
Crossroads	2,551	97.3	657	25.1	*	*
Cumberland	2,240	72.7	1,182	38.3	*	*
Durham	1,267	50.3	347	13.8	*	*
ECBH <sup>+</sup>	3,822	97.2	1,364	34.7	*	*
Eastpointe	3,111	106.7	995	34.1	*	*
Five County	1,939	84.0	604	26.2	*	*
Foothills	1,443	89.7	330	20.5	*	*
Guilford	2,466	54.0	1,478	32.4	*	*
Johnston	1,215	77.4	510	32.5	*	*
Mecklenburg	5,020	58.6	2,578	30.1	*	*
Onslow-Carteret	1,338	58.7	604	26.5	*	*
Orange-Person-Chatham	1,507	67.9	672	30.3	*	*
Pathways	4,491	121.3	1,181	31.9	*	*
Piedmont	6,556	93.9	1,842	26.4	*	*
Sandhills Center	5,016	94.7	1,714	32.3	*	*
Smoky Mountain	2,620	73.9	976	27.5	*	*
Southeastern Center	1,655	48.8	1,149	33.9	*	*
Southeastern Regional	2,431	95.0	1,131	44.2	*	*
Wake	5,325	64.8	1,819	22.1	*	*
Western Highlands	7,169	144.2	1,512	30.4	*	*

Source: NC DETECT, QTR 4, SFY 07

Note: Cells with counts below 10 have been suppressed to protect client confidentiality. The data presented does not include admission information on child substance abuse for Albemarle and Foothills LMEs.

<sup>&</sup>lt;sup>†</sup>Abbreviations ACR- Alamance-Caswell-Rockingham; ECBH- East Carolina Behavioral Health

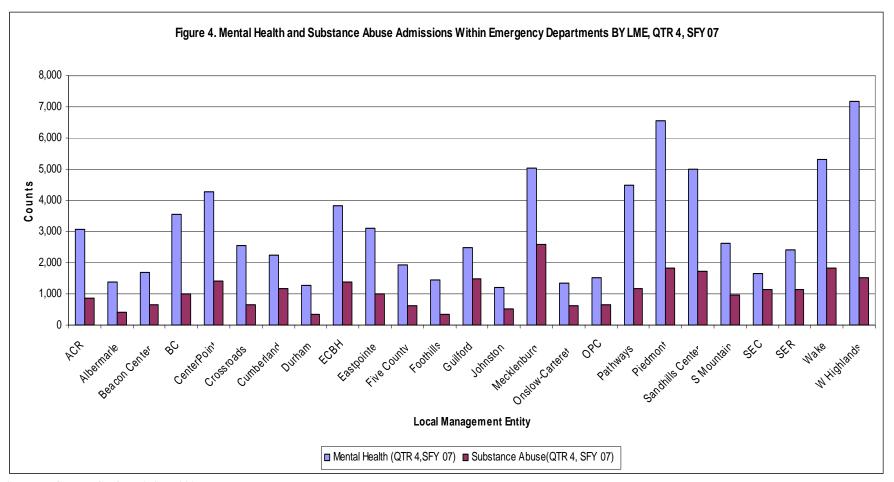
Table 2. Emergency Department Admissions by Local Management Entity, QTR 1, SFY 08, July 1- September 30, 2007						
Local Management Entity	Mental Health (n)	Rate of MH Admissions/10,000 population	Substance Abuse (n)	Rate of SA Admissions/10,000 population	Developmental Disabilities (n)	Rate of DD Admissions/10,000 population
Overall	80,708	89.3	28,059	31.0	*	*
ACR <sup>+</sup>	3,291	128.1	838	32.6	*	*
Albemarle	1,697	91.8	552	29.9	*	*
Beacon Center	1,719	70.3	639	26.1	*	*
Burke-Catawba	3,516	144.8	985	40.6	*	*
Center Point	4,372	102.8	1,384	32.6	*	*
Crossroads	2,392	91.2	660	25.2	*	*
Cumberland	2,454	79.6	1,250	40.6	*	*
Durham	1,189	47.2	371	14.7	*	*
ECBH <sup>+</sup>	3,827	97.3	1,361	34.6	*	*
Eastpointe	3,240	111.1	1,001	34.3	*	*
Five County	1,924	83.4	749	32.4	*	*
Foothills	1,508	93.7	360	22.4	*	*
Guilford	2,595	56.8	1,471	32.2	*	*
Johnston	1,314	83.8	509	32.4	*	*
Mecklenburg	5,278	61.6	2,868	33.5	*	*
Onslow-Carteret	1,281	56.2	639	28.0	*	*
Orange-Person-Chatham	1,678	75.6	758	34.1	*	*
Pathways	4,594	124.1	1,140	30.8	*	*
Piedmont	6,775	97.1	1,943	27.8	*	*
Sandhills Center	5,039	95.1	1,670	31.5	*	*
Smoky Mountain	3,099	87.5	1,136	32.1	*	*
Southeastern Center	1,879	55.4	1,197	35.3	*	*
Southeastern Regional	2,735	106.9	1,186	46.4	*	*
Wake	5,611	68.2	1,762	21.4	*	*
Western Highlands	7,701	154.9	1,630	32.8	*	*

Source: NC DETECT, QTR 1, SFY 08

Note: Cells with counts below 10 have been suppressed to protect client confidentiality. The data presented does not include admission information on child substance abuse for Durham and Johnston LMEs and child mental health admissions for Johnston, Onslow Carteret and Albemarle LMEs.

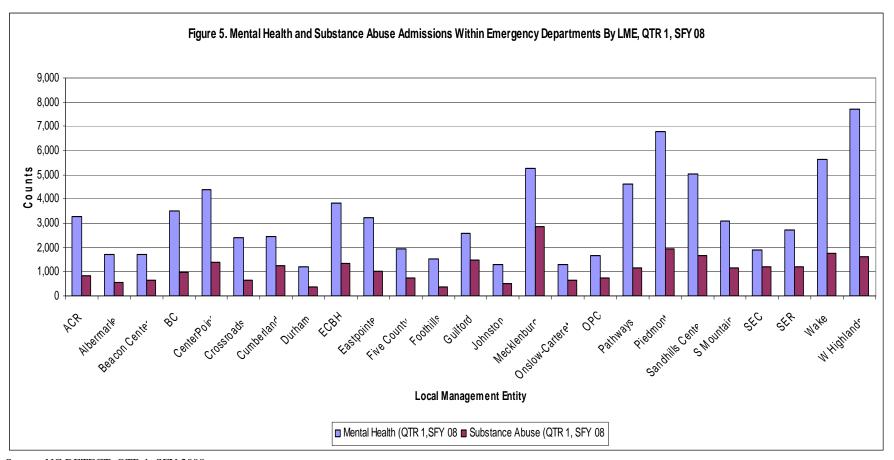
Abbreviations: ACR- Alamance-Caswell-Rockingham; ECBH- East Carolina Behavioral Health

Figures 4 and 5 shows the total counts of mental health and substance abuse admissions by Local Management Entities for the fourth quarter, SFY 2007 and first quarter, SFY 2008.



Source: NC DETECT QTR 4, SFY 2007

Abbreviations ACR- Alamance-Caswell-Rockingham; BC- Burke-Catawba, ECBH- East Carolina Behavioral Health, OPC-Orange -Person -Chatham, SEC- Southeastern Center, SER-Southeastern Regional, WHighlands-Western Highlands



Source: NC DETECT, QTR 1, SFY 2008

Abbreviations ACR- Alamance-Caswell-Rockingham; BC- Burke-Catawba, ECBH- East Carolina Behavioral Health, OPC-Orange –Person –Chatham, SEC- Southeastern Center, SER-Southeastern Regional, WHighlands-Western Highlands

Table 3 and 4 gives the counts for mental health and substance abuse admissions disaggregated by age group (adult and child) for each of the twenty five Local Management Entities. When cell sizes were less than 10 the counts have been suppressed.

Table 3. Emergency Department Admissions by Age Group and LME, QTR 4, SFY 07, April 1- June 30, 2007					
	Adult Mental	Child Mental	Adult Substance	Child Substance	Total ED
	Health	Health	Abuse	Abuse	Admissions
	Admissions (n)	Admissions (n)	Admissions (n)	Admissions (n)	(n)
Alamance-Caswell-Rockingham	2,832	225	829	19	29,583
Albemarle	1,307	86	426	*	16,115
Beacon Center	1,556	135	637	13	19,797
Burke-Catawba	3,313	240	972	22	29,416
CenterPoint	3,969	294	1,383	37	44,072
Crossroads	2,401	150	643	14	33,471
Cumberland	1,971	269	1,161	21	22,206
Durham	1,234	42	347	*	13,570
East Carolina Behavioral Health	3,546	276	1,337	27	42,005
Eastpointe	2,846	265	968	27	34,334
Five County	1,782	157	586	18	25,326
Foothills	1,355	88	330	*	13,879
Guilford	2,316	150	1,444	34	45,065
Johnston	1,097	118	499	11	18,465
Mecklenburg	4,756	264	2,524	54	84,763
Onslow-Carteret	1,239	99	585	19	19,526
Orange-Person-Chatham	1,409	98	657	15	15,603
Pathways	4,128	363	1,158	23	46,522
Piedmont	6,053	503	1,773	69	76,042
Sandhills	4,685	331	1,669	45	60,705
Smoky Mountain	2,494	126	950	26	33,054
Southeastern Center	1,608	47	1,129	20	30,343
Southeastern Regional	2,229	202	1,107	24	28,887
Wake	4,893	432	1,775	44	64,050
Western Highlands	6,812	357	1,483	29	45,172

Source: NC DETECT, QTR 4, SFY 07

Note: Cells with counts below 10 have been suppressed to protect client confidentiality. The data presented does not include admission information on child substance abuse for Albemarle, Durham and Foothills LMEs.

Table 4. Emergency Departmen	nt Admissions by Ag	ge Group and LMF	E, QTR 1, 2008, Ju	ly 1- September 30	0, 2007
	Adult Mental Health Admissions	Child Mental Health Admissions	Adult Substance Abuse Admissions	Child Substance Abuse Admissions	Total ED Admissions
Alamance-Caswell-Rockingham	3,055	236	820	18	30,605
Albemarle	1,697	*	537	15	19,070
Beacon Center	1,608	111	625	14	19,930
Burke-Catawba	3,298	218	959	26	30,233
CenterPoint	4,060	312	1,351	33	44,568
Crossroads	2,293	99	642	18	33,458
Cumberland	2,192	262	1,229	21	23,004
Durham	1,149	40	371	*	14,058
East Carolina Behavioral Health	3,598	229	1,334	27	43,140
Eastpointe	3,032	208	987	14	34,875
Five County	1,802	122	736	13	27,561
Foothills	1,425	83	349	11	14,700
Guilford	2,460	135	1,440	31	46,001
Johnston	1,210	*	509	*	19,212
Mecklenburg	4,993	285	2,813	55	84,728
Onslow Carteret	1,281	*	626	13	18,820
Orange Person Chatham	1,567	111	744	14	15,874
Pathways	4,202	392	1,109	31	47,424
Piedmont	6,326	449	1,872	71	75,338
Sandhills	4,720	319	1,630	40	60,352
Smoky Mountain	2,931	168	1,108	28	38,756
Southeastern Center	1,808	71	1,175	22	26,007
Southeastern Regional	2,500	235	1,157	29	29,034
Wake	5,234	377	1,719	43	65,572
Western Highlands	7,280	421	1,586	44	49,633

Source: NC DETECT, QTR 1, SFY 08

Note: Cells with counts below 10 have been suppressed to protect client confidentiality. The data presented does not include admission information on child substance abuse for Durham and Johnston LMEs and child mental health admissions for Johnston, Onslow-Carteret and Albemarle LMEs.



Appendix A. List of Hospitals Contributing Data to NC DETECT (November 7, 2007)

Hospital	Location
Alamance	Burlington/Alamance
Albemarle	Elizabeth City/Pasquotank
Alleghany	Sparta/Alleghany
Angel	Franklin/Macon
Annie Penn	Reidsville/Rockingham
Anson	Wadesboro/Anson
Ashe	Jefferson/Ashe
Beaufort	Washington/Beaufort
Bertie	Windsor/Bertie
Betsy Johnson	Dunn/Harnett
Bladen	Elizabethtown/Bladen
Blowing Rock	Blowing Rock/Watauga
Brunswick	Supply/Brunswick
Caldwell	Lenoir/Caldwell
Charles A. Cannon	Linville/Avery
Cape Fear Valley	Fayetteville/Cumberland
Carteret	Morehead City/Carteret
Catawba Valley	Hickory/Catawba
Central Carolina	Sanford/Lee
Chatham	Siler City/Chatham
Chowan	Edenton/Chowan
Cleveland	Shelby/Cleveland
CMC	Charlotte/Mecklenburg
CMC Mercy	Charlotte/Mecklenburg
CMC Pineville	Charlotte/Mecklenburg
CMC University	Charlotte/Mecklenburg
Columbus	Whiteville/Columbus
Craven	New Bern/Craven
Davie	Mocksville/Davie
Davis	Statesville/Iredell
Dosher	Southport/Brunswick
Duke	Durham/Durham
Duke Raleigh	Raleigh/Wake
Duplin	Kenansville/Duplin
Durham Regional	Durham/Durham
FHS Montgomery	Troy/Montgomery
FHS Moore	Pinehurst/Moore
FHS Richmond	Rockingham/Richmond
Forsyth	Winston-Salem/Forsyth
Franklin	Louisburg/Franklin
Frye	Hickory/Catawba
Frye Alexander	Taylorsville/Alexander
Gaston	Gastonia/Gaston

Grace	Morganton/Burke		
Granville	Oxford/Granville		
Halifax	Roanoke Rapids/Halifax		
Harris	Sylva/Jackson		
Haywood	Clyde/Haywood		
Heritage	Tarboro/Edgecombe		
High Point	High Point/Guilford		
Highlands	Highlands/Macon		
Hoots	Yadkinville/Yadkin		
Hugh Chatham	Elkin/Surry		
Iredell	Statesville/Iredell		
Johnston	Smithfield/Johnston		
Kings Mountain	Kings Mountain/Cleveland		
Lake Norman	Mooresville/Iredell		
Lenoir	Kinston/Lenoir		
Lexington	Lexington/Davidson		
Lincoln	Lincolnton/Lincoln		
Margaret Pardee	Hendersonville/Henderson		
Maria Parham	Henderson/Vance		
Martin	Williamston/Martin		
McDowell	Marion/McDowell		
Mission	Asheville/Buncombe		
Morehead	Eden/Rockingham		

**Note:** As of November 5, 2007, there are 105 hospitals submitting production-level data on a daily basis to NC DETECT.